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1-17-02

I. AMENDMENT

IN THE CLAIMS:

Please cancel claims 1-70, without prejudice.

Please add following new claims 71-96 ~~79-104~~.

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71
--~~79~~. A method of stimulating growth of melanocyte precursor cells in a human, the method comprising the step of administering to the human, an amount of a human stem cell factor (SCF) polypeptide and optionally a pharmaceutically acceptable carrier.

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~~80~~. The method of claim 79 wherein stem cell factor polypeptide selected is selected from the group consisting of amino acids 1-162, 1-164, and 1-165 as set out in Figure 15C, said polypeptide optionally consisting of an N-terminal methionine.

Cont
SC 11

73
~~81~~. The method of claim 79 wherein the stem cell factor polypeptide is selected from the group consisting of amino acids 1-100, 1-110, 1-120, 1-123, 1-127, 1-130, 1-133, 1-137, 1-141, 1-145, 1-148, 1-152, 1-156, 1-157, 1-158, 1-159, 1-160, 1-161, 1-163, 1-166, 1-168, 1-173, 1-178, 2-164, 2-165, 5-164, 11-164, 1-180, 1-183, 1-185, 1-188, 1-189, 1-220, and 1-248 as set out in Figures 42A-C, said polypeptide optionally consisting of an N-terminal methionine.

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~~82~~. The method of claim 79 wherein the stem cell factor polypeptide is selected from the group consisting of amino acids 1-152, 1-157, 1-160, 1-161, and 1-220 as set out in Figure 44A-C, said polypeptide optionally consisting of an N-terminal methionine.

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83. A method of treating a pigmentation disorder in a human, the method comprising the step of administering to the human, a therapeutically effective amount of a stem cell factor (SCF) polypeptide and optionally a pharmaceutically acceptable carrier.

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84. The method of claim 83 wherein the stem cell factor polypeptide is selected from the group consisting of amino acids 1-162, 1-164, and 1-165 as set out in Figure 15C, said polypeptide optionally consisting of an N-terminal methionine.

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85. The method of claim 83 wherein the stem cell factor polypeptide is selected from the group consisting of amino acids 1-100, 1-110, 1-120, 1-123, 1-127, 1-130, 1-133, 1-137, 1-141, 1-145, 1-148, 1-152, 1-156, 1-157, 1-158, 1-159, 1-160, 1-161, 1-163, 1-166, 1-168, 1-173, 1-178, 2-164, 2-165, 5-164, 11-164, 1-180, 1-183, 1-185, 1-188, 1-189, 1-220, and 1-248 as set out in Figures 42A-C, said polypeptide optionally consisting of an N-terminal methionine.

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86. The method of claim 83 wherein the stem cell factor polypeptide is selected from the group consisting of amino acids 1-152, 1-157, 1-160, 1-161, and 1-220 as set out in Figure 44A-C, said polypeptide optionally consisting of an N-terminal methionine.

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87. The method of claim 79 or 83 wherein the stem cell factor is covalently conjugated to a water-soluble polymer.

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88. The method of claim 87 wherein the water-soluble polymer is polyethylene

glycol.

89. The method of claim 79, or 83 wherein the stem cell factor is co-administered with at least one other cytokine.

90. The method of claim 87 wherein the stem cell factor is co-administered with at least one other cytokine.

91. The method of claim 89 wherein one or more cytokines are selected from a group consisting of IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, EPO, G-CSF, M-CSF, GM-CSF, IGF-1, and LIF.

92. The method of claim 90 wherein one or more cytokines are selected from a group consisting of IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, EPO, G-CSF, M-CSF, GM-CSF, IGF-1, and LIF.

93. The method of claim 79 wherein the pharmaceutically acceptable carrier is suitable for topical delivery.

94. The method of claim 79 wherein the pharmaceutically acceptable carrier is suitable for oral delivery.

95. The method of claim 79 wherein the pharmaceutically acceptable carrier is

suitable for parenteral delivery.

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~~96~~. The method of claim 79 wherein the pharmaceutically acceptable carrier is suitable for pulmonary delivery.

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~~97~~. The method of claim 79 wherein the pharmaceutically acceptable carrier is suitable for nasal delivery.

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~~98~~. The method of claim 83 wherein the pharmaceutically acceptable carrier is suitable for topical delivery.

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~~99~~. The method of claim 83 wherein the pharmaceutically acceptable carrier is suitable for oral delivery.

92
~~100~~. The method of claim 83 wherein the pharmaceutically acceptable carrier is suitable for parenteral delivery.

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~~101~~. The method of claim 83 wherein the pharmaceutically acceptable carrier is suitable for pulmonary delivery.

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~~102~~. The method of claim 83 wherein the pharmaceutically acceptable carrier is suitable for nasal delivery.